

## **REMARKS**

Reconsideration and withdrawal of the rejections of this application and consideration and entry of this paper are respectfully requested in view of the herein remarks, which place the application in condition for allowance.

### **I. STATUS OF CLAIMS AND FORMAL MATTERS**

Claims 1-6 and 8-16 are pending in this application. The language of claim 7 has been incorporated into claim 1 and claim 7 has been cancelled. Applicants reserve the right to pursue the subject matter of cancelled claims in continuing applications. No new matter has been added by this amendment.

The specification has been amended to correct the typographical error with respect to units of measurement for surface area (see Table 1 and lines 15 on page 3 for examples of correct units of measurement for surface area).

It is submitted that the claims, herewith and as originally presented, are patentably distinct over the prior art cited in the Office Action, and that these claims were in full compliance with the requirements of 35 U.S.C. § 112. The amendments of the claims, as presented herein, are not made for purposes of patentability within the meaning of 35 U.S.C. §§§§ 101, 102, 103 or 112. Rather, these amendments and additions are made simply for clarification and to round out the scope of protection to which Applicants are entitled.

### **II. THE 35 U.S.C. §112, 2<sup>ND</sup> PARAGRAPH REJECTIONS HAS BEEN OVERCOME**

Claims 1-16 were rejected as allegedly failing to distinctly claim the subject matter which applicants regard as their invention.

With regard to the definition of A, the appropriate correction for the unit of measurement has been made. With regard to the viscosity limitation, it is well known within the art that physical characteristics are for room temperature unless otherwise indicated.

Reconsideration and withdrawal of the objections are requested.

### **III. THE 35 U.S.C. 102(b)/103(a) REJECTION HAS BEEN OVERCOME**

Claims 1-6 and 8-14 were allegedly being anticipated by Litteral (U.S. Patent 3,694,405).

Claim 7 was rejected as allegedly being anticipated or in the alternative as being obvious over Litteral (U.S. Patent 3,694,405).

Since the claim language of claim 7 has been inserted into claim 1, the original rejection of claims 1-6 and 8-14 have been rendered moot. The rejection of claim 7 is addressed as it applies to claims 1-6 and 8-14 as amended.

"Rejection for anticipation requires, as first step in inquiry, that all elements of claimed invention be described in single reference, and such reference must describe applicant's claimed invention sufficiently to have placed person of ordinary skill in possession of it." see *In re Spada*, 15 USPQ2d 1655, (Fed. Cir. 1990); see also MPEP 2131. However, Litteral does not meet this standard for the claims as amended.

It is noted that comparing Litteral to the applicants' claims with respect to pore diameter is like comparing apples and oranges because the respective references are referring to different units of measurement.

When the Examiner is referring to the "upper average pore diameter value of 60", it is presumed she is referring to the passage on col. 9, line 45 ("Average port (sic) diameter, A ---- 200 to 600" = 20-60 nm). However in Litteral, the "20-60 nm" range is describing the range of particle distribution that can make up their mean or average pore diameter, it does not describe an actual average for the entirety covering 20-60 nm. By way of example, the applicants refer to page 6 of Rohm and Haas' "Produktübersicht" (Product Review) from 1996 which cites the characteristics of their Amberlyst 15 product which states that their product has a "Mittlerer Porendurchmesser" (Mean Pore Diameter) of 25 nm (which, by way of an illustrative example, could be achieved by a spread of particle sizes as follows: 20% (20 nm); 50% (25 nm); 10% (35 nm); 5% (40 nm); 5% (60 nm)).

Further evidence that the 20-60 nm range of Litteral is describing a distribution range and not a mean pore diameter, i.e. a mean pore diameter of 20 nm or 21 nm or 22 nm...or 58 nm or 59 nm or 60 nm, comes from the other characteristics described on col. 9 which is incongruous with the Examiner's interpretation, e.g. surface area  $\text{m}^2/\text{g}$  of 40 to 50; porosity of,  $\text{mL.pore/mL.bead}$  of 0.30 to 0.35; specific pore volume,  $\text{cc./gm}$  of 0.029 to 0.038 (these characteristics would not be possible if the average pore diameter distribution were to be read as inclusive of higher mean pore diameters).

For this reason, Litteral does not teach each and every element of the applicants' claimed invention as Litteral lacks the applicants mean pore diameter of the macrocrosslinked cation exchange resin is at least about 65 nm and therefore, the claims are not anticipated by Litteral.

In addition, Litteral does not render the applicants' claims to be obvious for the reasons cited against anticipation. Such that it would be argued that it would have been obvious to modify the mean pore diameter, this argumentation would fail on two counts. First, optimization of ranges requires that the prior art recognize that the element to be optimized is a results effective variable (see MPEP 2144.05, section II). Litteral does not make this recognition. Second, to enlarge the mean pore diameter of Litteral would represent a teaching away from their invention, i.e. larger mean pore diameters would result in products that do not have the cited characteristics for Amberlyst 15.

Therefore, Litteral also does not render the applicants' claimed invention as amended to be obvious.

### CONCLUSION

In view of the remarks and amendments herewith, the application is believed to be in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are earnestly solicited. The undersigned looks forward to hearing favorably from the Examiner at an early date, and, the Examiner is invited to telephonically contact the undersigned to advance prosecution. The Commission is authorized to charge any fee occasioned by this paper, or credit any overpayment of such fees, to Deposit Account No. 50-0320.

Respectfully submitted,  
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Enclosure: Copy of Rohm & Haas Product Review (Ion Exchange Resins)

# *Produktübersicht*

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Warenzeichen	Name	Matrix	Porosität	Ankergruppe	Harztyp	Lieferform	Total-Kapazität eq/l	Schüttgewicht g/l	Max Temp °C
<b>Produktion (andere)</b>									
AMBERLITE	IRC50	Methacryl-DVB	MP	schwach sauer	Kation	H	3,25	660	120
AMBERLITE	CG50, Typ 1	Methacryl-DVB	MP	schwach sauer	Kation	H	10 eq/kg	*	120
AMBERLITE	LA2	flüssiges Amin		schwach basisch	Anion	FB		*	60
AMBERLITE	IRA67	Acryl-DVB	Gel	schwach basisch	Anion	FB	1,60	700	50**
DUOLITE	A568	Phenolformaldehyd		schwach basisch	Anion	FB	1,20	440	50
AMBERLITE	IRA404 Cl	Styrol-DVB	Gel	stark basisch	Anion	Cl	1,05	700	90
AMBERLITE	IRA958 Cl	Acryl-DVB	MP	stark basisch	Anion	Cl	0,80	720	80

#### Galenik

AMBERLITE	IRP64	Methacryl	MP	schwach sauer	Kation	H	10 eq/kg	*	
AMBERLITE	IRP69	Styrol-DVB	Gel	stark sauer	Kation	Na	4,3 eq/kg	*	
AMBERLITE	IRP88	Methacryl	MP	schwach sauer	Kation	K		*	
DUOLITE	CP2120	Styrol-DVB	Gel	stark sauer	Kation	Ca		*	
DUOLITE	CP2110	Styrol-DVB	Gel	stark sauer	Kation	Na		*	
DUOLITE	AP143/1073	Styrol-DVB	Gel	stark basisch	Anion	Cl	3,7 eq/kg	*	
DUOLITE	AP143/1093	Styrol-DVB	Gel	stark basisch	Anion	Cl	3,7 eq/kg	*	

### Katalysatoren

Warenzeichen	Name	Typ	Matrix	% DVB	Oberfläche m <sup>2</sup>	Mittlerer Porendurchmesser	Konzentration an Aktivgruppen (min) eq/kg	Wassergehalt %	Schüttgewicht g/l	Max Temp. °C
<b>Oktanzahlverbesserer (MTBE, ETBE, TAME)</b>										
AMBERLYST	15Wet	stark sauer	MP	20	45	25	4,70	51 - 56	770	120
AMBERLYST	35Wet	stark sauer	MP	20	44	30	5,20	49 - 55	810	130
AMBERLYST	CSP3	stark sauer	MP	20	44	30	5,20	49 - 55	820	130
<b>Phenolreinigung</b>										
AMBERLYST	16Wet	stark sauer	MP	12	35	20	4,80	47 - 54	780	125
<b>Phenolalkylierung</b>										
AMBERLYST	15Dry	stark sauer	MP	20	45	25	4,70	1,5 max	*	130
AMBERLYST	36Dry	stark sauer	MP	12	25	20	5,40	3 max	*	150
<b>Bisphenol A</b>										
AMBERLYST	31	stark sauer	Gel	4	-	-	4,80	60 - 66	770	130
<b>Säure-Entfernung</b>										
AMBERLYST	A21	schwach basisch	MP	-	25	40	4,70	54 - 60	660	100
<b>Hydrierung (MIBK, TAME)</b>										
AMBERLYST	16C/4608	stark sauer	MP	12	35	20	4,80	47 - 54	*	120
<b>Säurestoffentfernung</b>										
AMBERLYST	ER206	stark basisch	MP	-	3	40	4,20 (Cl)	58 - 64 (Cl)	*	60
<b>Olefinhydratisierung</b>										
AMBERLYST	36W	stark sauer	MP	12	35	20	5,40	54 - 59	801	140

\* Verkauf nach Gewicht

\*\* max. erlaubte Temperatur, bezogen auf die geltenden Richtlinien

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